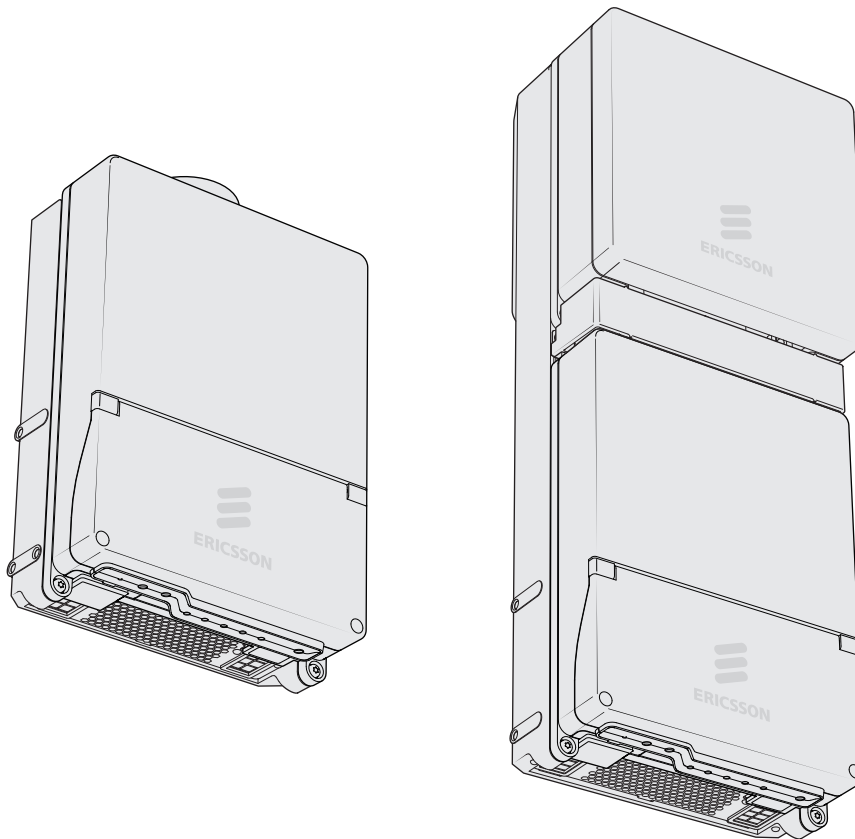


Baseband Description

Baseband 6502, Micro 6502

Description



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1 Product Overview

The Baseband includes Baseband 6502 and Micro 6502. It can support WCDMA and LTE FDD/TDD.

Baseband 6502 is an outdoor Baseband unit. It integrates the digital unit and GPS function into one unit and can work with radio unit.

Micro 6502, a member of the RBS 6000 family, is a small RBS which is part of the Ericsson heterogeneous network small cell toolbox. It integrates the digital unit, radio unit, antenna, and GPS function into one unit.

Figure 1 shows a Baseband that is installed in an outdoor environment, as an example.

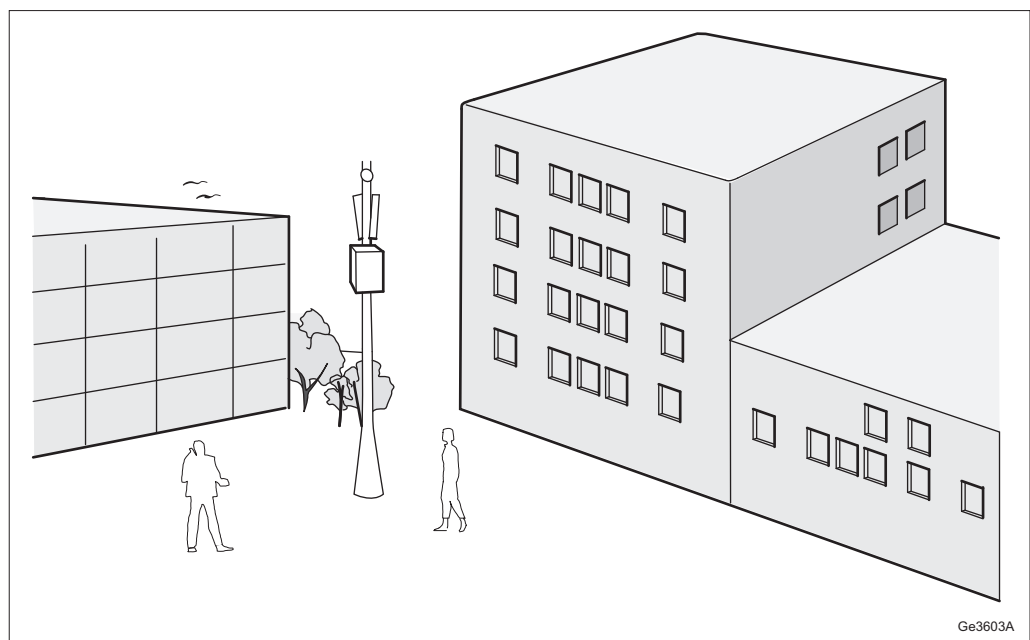


Figure 1 Baseband in an Outdoor Environment

1.1 Function Description

The Baseband has the following functions:

- Timing function
- Loadable software
- Downlink baseband processing



- Uplink baseband processing
- IP traffic management
- Radio interface
- Transmission handling
- Integrated GPS receiver

For the block diagram of the Baseband, see [Figure 2](#).

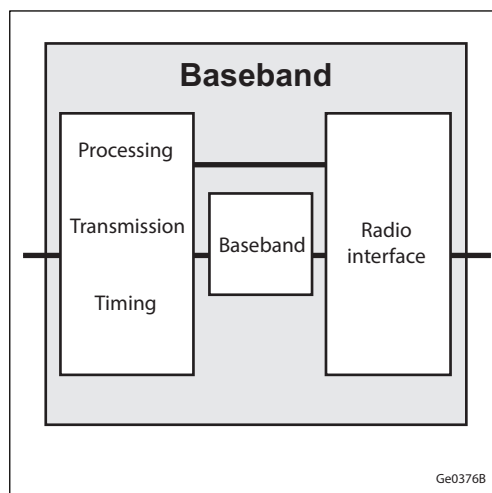


Figure 2 Baseband Block Diagram

1.2 Optional Equipment

The optional equipment for the Baseband is as follows:

- External Antenna
- Integrated Directional Antenna
- Rail installation equipment (Baseband 6502 only)
- Integrated GPSAntenna
- External GPS Antenna
- Tilt installation kit (Micro 6502 only)

1.3 Warranty Seal

The unit is equipped with a warranty seal sticker.



Note: Seals that have been implemented by Ericsson must not be broken or removed, as it otherwise voids warranty.



2 Technical Data

This section contains physical characteristics, environmental data, and the power information of the Baseband.

2.1 Technical Data Summary

Technical data for the Baseband is listed in [Table 1](#) and [Table 2](#).

Table 1 Dimensions and Weight

Baseband	Height	Width	Depth	Weight
Baseband 6502	267 mm	200 mm	92 mm	5.1 kg
Micro 6502 (without cover and antenna)	503 mm	200 mm	99 mm	10 kg

Table 2 Technical Data

Capacity Data LTE	Capacity Data WCDMA Maximum DCH Capacity (Measured in Channel Elements)	Supported Radio Interface Connections CPRI
<ul style="list-style-type: none">• 1000 connected users• 240 MHz antenna bandwidth⁽¹⁾• Max 6 cells• Up to 200 FDD or 100 TDD VoIP users• 600 Mbps DL throughput⁽¹⁾⁽²⁾• 250 Mbps UL throughput⁽¹⁾⁽²⁾	576 DL 576 UL, 2048 EUL Max 6 cell carriers	3 radio ports 2.5 Gbps, 4.9 Gbps ⁽³⁾ , 9.8 Gbps ⁽³⁾ , and 10.1 Gbps ⁽³⁾

(1) Depending on the Radio Configuration

(2) Depending on HW Utilization Packages (HUPs)

(3) Depending on the Software Package

For more information about supported configurations and capacity, refer to *RBS Configurations*.

2.2 Installation Recommendations

To ensure reliable operation and maximum performance, an appropriate installation location must be chosen.



When using the optional integrated directional antenna make sure the radio is not pointing at any elements that can disturb the radio signals.

2.2.1 Indoor Locations to Avoid

Although the unit is designed for outdoor use, it can be used indoors. For indoor locations Ericsson recommends to operate according to ETSI EN 300 19-1-3 class 3.1, 3.2, 3.3, and 3.6. This does not cover installation with heat traps or installation in lofts, where air ventilation does not exist. To ensure smooth performance, avoid installing the unit in a potential microclimate location, for example, places with unventilated lofts, with heat traps, or where the product is exposed to direct sunlight through windows. Avoid installing the equipment under glass covers or skylight windows without proper ventilation.

2.2.2 Outdoor Locations to Avoid

Although Ericsson declares this product suitable for outdoor environments, avoid installing the unit in a potential microclimate location. Typical examples of microclimate locations are sites where the product is not only exposed to the actual surrounding temperature, but additional temperature as heat coming from dark colored planes, for example, reflections from the floor or walls. The additional temperature can generate heat traps with temperatures up to 10°C higher than expected.

Avoid installing equipment in the following locations:

- Near the exhaust of building ventilation systems
- Near the exhaust of chimneys
- Opposite large surfaces made of glass or new concrete

If the unit is to be placed in an environment subjected to lightning strike, an external Surge Protection Device (SPD) is needed.

2.2.3 Other Considerations

Installing the radio close to other electronic equipment can cause interferences.

For sites with risk of ground fire, the recommended minimum installation height is 3 m.

2.2.4 Painting Limitations

Ericsson does not recommend painting the Baseband as it may affect performance of the unit.



Ericsson will apply limitations to the warranty and service contract if the Baseband is painted.

2.2.4.1 Technical Limitations

If the Baseband is painted, be aware of the technical limitations below:

- Sunlight on dark paint may increase the temperature of the radio causing it to shut down.
- The plastic surfaces and the plastic covers are suited for painting with normal, commercially available one- or two-component paints.
- Never use metallic paint or paint containing metallic particles.
- Ensure that ventilation and drainage holes are free from paint.
- Ensure proper adhesion of the paint.

2.2.4.2 Commercial Limitations

If the Baseband is painted, the commercial limitations below apply:

- Failure modes directly related to overheating due to painting are not valid for repair within the scope of the warranty or standard service contract.
- Product failures related to paint contamination of components of the unit are not valid for repair within the scope of warranty or standard service contract.
- When a painted unit is repaired, it will be restored to the standard color before being returned to the market. It is not possible to guarantee the same unit being sent back to the same place. This is also valid for units repaired under a service contract.
- For repairs within the warranty period or a standard service contract, the customer will be charged the additional costs for replacing all painted parts of the unit or the complete unit.

2.3 Space Requirements

The Baseband installation alternatives are shown in [Table 3](#).

Table 3 Baseband Installation Alternatives

Baseband	Wall Installation	Rail Installation	Pole Installation	Ceiling Installation (only for indoor)	Wall Installation Using a Tilt Installation Kit	Pole Installation Using a Tilt Installation Kit
Baseband 6502	Yes	Yes	Yes	Yes	No	No

Baseband	Wall Installation	Rail Installation	Pole Installation	Ceiling Installation (only for indoor)	Wall Installation Using a Tilt Installation Kit	Pole Installation Using a Tilt Installation Kit
Micro 6502	Yes	No	Yes	Yes	Yes	Yes

Note: Only vertical mounted is allowed for outdoor installation alternatives on R1A version.

The installation alternatives are shown in [Figure 3](#) and [Figure 4](#).

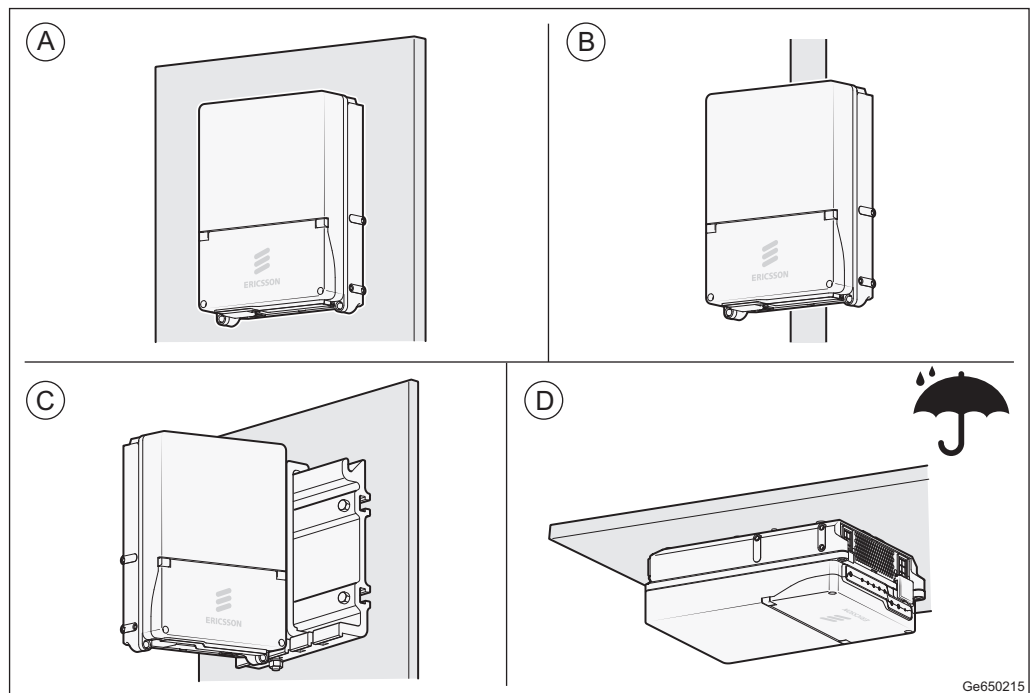


Figure 3 Alternative Installation Methods for Baseband 6502

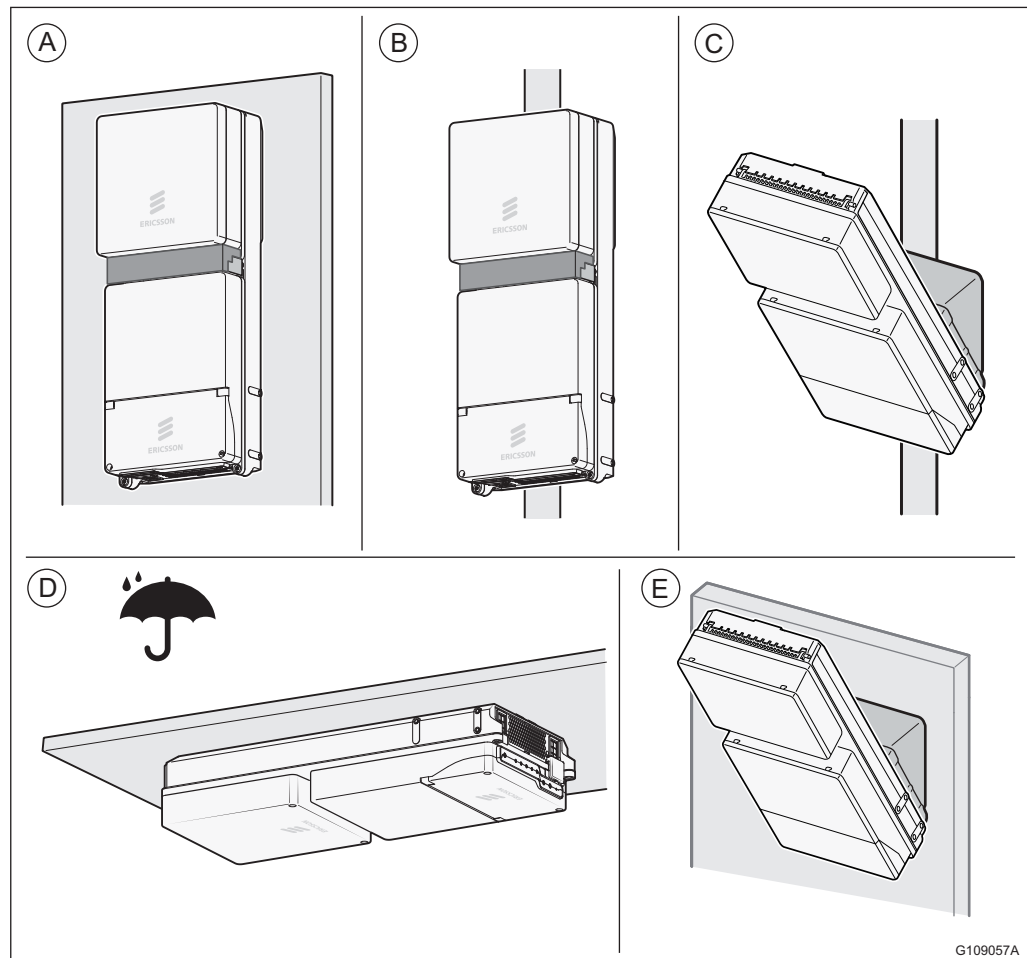


Figure 4 Alternative Installation Methods for Micro 6502

2.3.1 Generic Requirements

The Baseband can be placed directly against each other side by side. To ensure sufficient working space, allow adequate free space in front of the Baseband.

2.3.2 Wall Installation

The installation requirements if installing Baseband 6502 on a wall are shown in [Figure 5](#).

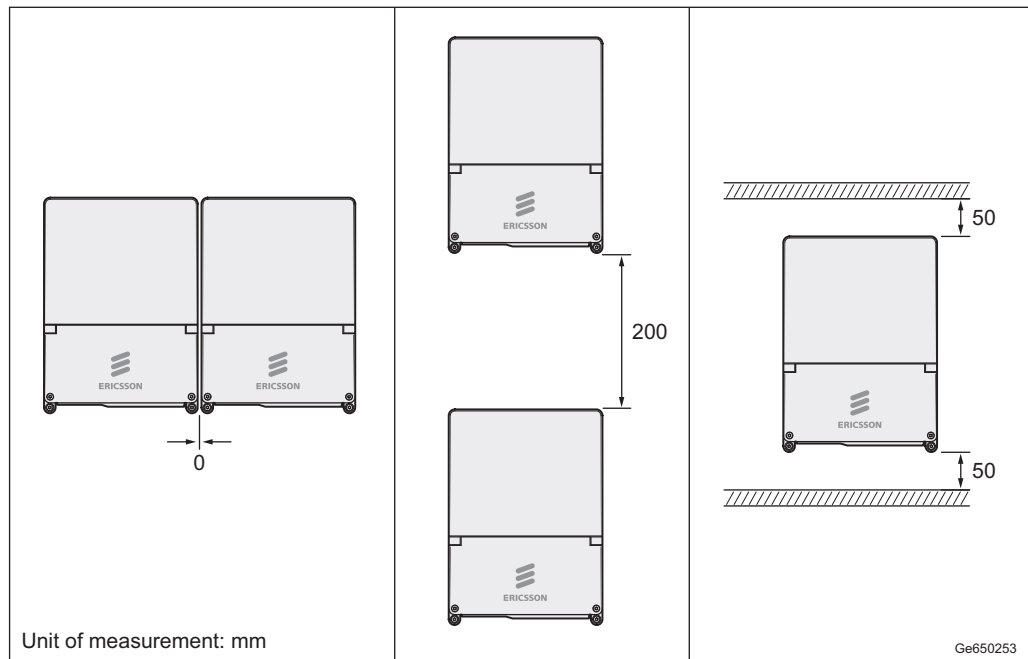


Figure 5 Wall Installation, Baseband 6502

The installation requirements if installing Micro 6502 on a wall are shown [Figure 6](#).

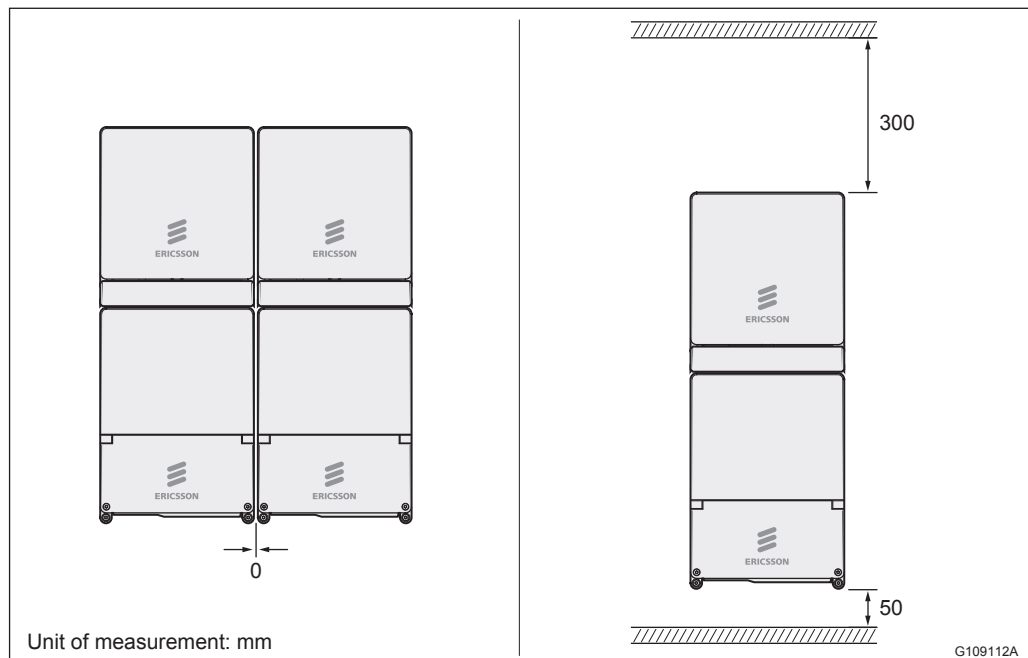


Figure 6 Wall Installation, Micro 6502

To ensure adequate airflow between the units, allow a minimum of 300 mm free space between the baseband and the roof.

2.3.3 Rail Installation

The installation requirements if installing the Baseband on a rail are shown in [Figure 7](#).

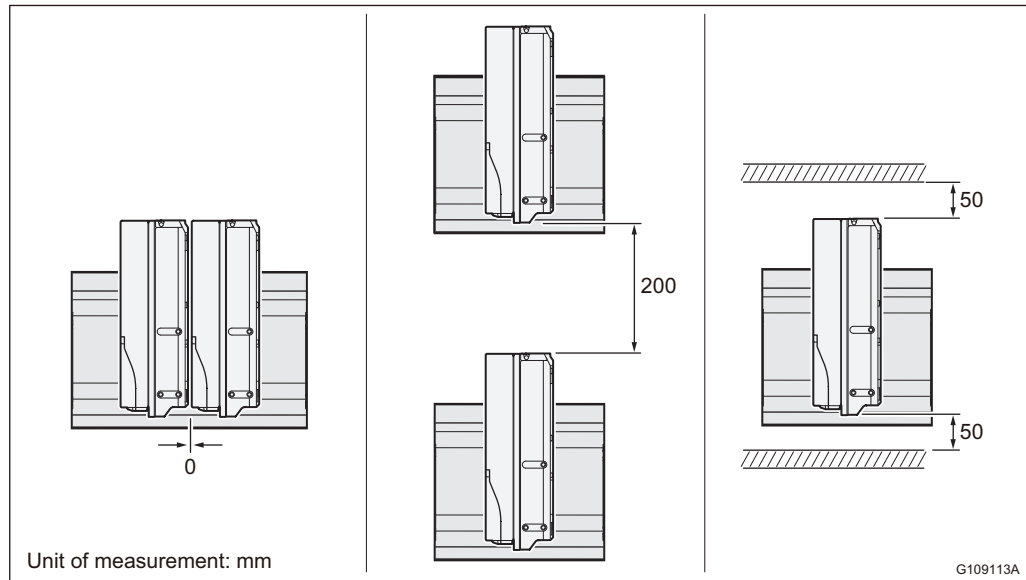


Figure 7 Rail Installation

2.3.4 Pole Installation

The installation requirements if installing Baseband 6502 on a pole are shown in [Figure 8](#).

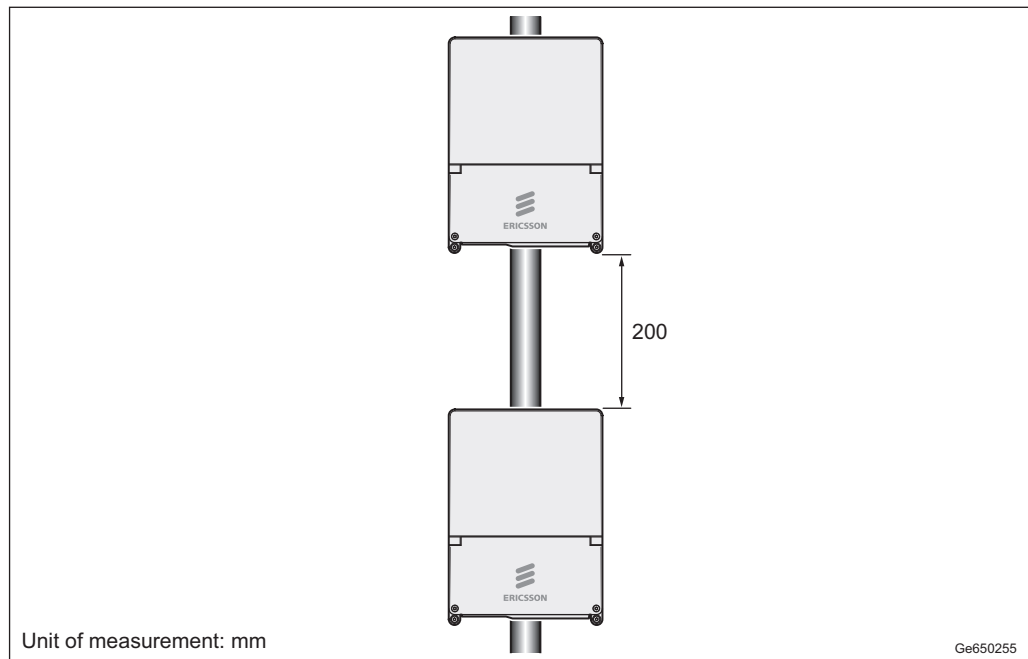


Figure 8 Pole Installation, Baseband 6502

To ensure adequate airflow between the units, allow a minimum of 200 mm free space.

The pole dimensions are described in [Table 4](#).

Table 4 Pole Dimensions

Type	Minimum Dimension (mm)	Maximum Dimension (mm)
Pole Clamp	Ø40	Ø150
	Ø140	Ø300
	Ø250	Ø500

2.3.5 Ceiling Installation

The installation requirements if installing the Baseband on a ceiling are shown in [Figure 9](#).

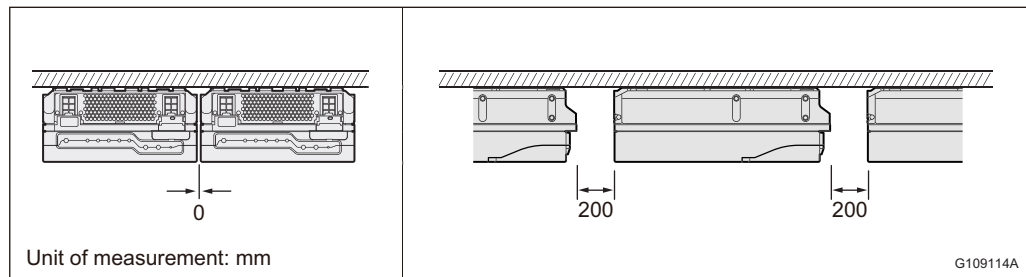


Figure 9 Ceiling Installation

To ensure adequate airflow between the units, allow a minimum of 200 mm free space between Baseband installed on a roof beside one another.

2.4 Acoustic Noise

The sound pressure levels are shown in [Table 5](#) and [Table 6](#).

Table 5 Sound Pressure Level for Baseband 6502

Temperature (°C)	Sound Pressure, L_{eqA} 2m distance (dBA)
+20	31
+30	34
+40	45
+50	53
+55	55

Table 6 Sound Pressure Level for Micro 6502

Temperature (°C)	Sound Pressure, L_{eqA} 2m distance (dBA)
+20	29
+30	33
+40	47
+50	59
+55	60

Note: The acoustic noise varies with the supported radio variant, and the configuration in the table above is for that using Radio 2203 B3C variant.

2.5 Environmental Characteristics

This section contains operating environment data for the Baseband.



2.5.1 Operating Environment

The following are the values for the normal operating environment of the Baseband:

Temperature	−40°C to +55°C
Solar radiation	≤ 1,120 W/m ²
Relative humidity	5–100%
Absolute humidity	0.26–40 g/m ³
Maximum temperature change	0.5°C/min
Maximum wind load at 50 m/s (pole installed Baseband 6502)	80 N (front)
Maximum wind load at 50 m/s (pole installed Micro 6502)	151 N (front)

2.5.2 Heat Dissipation

The Baseband is designed for outdoor installation. [Table 7](#) shows the Baseband maximum heat dissipation. Indoor installation in a room without adequate ventilation and cooling must be avoided.

Table 7 Baseband Heat Dissipation

Unit	Maximum Heat Dissipation (W)
Baseband 6502	160
Micro 6502	275 ⁽¹⁾

(1) Vary a little between different radios.

2.5.3 Vibration

The Baseband operates reliably during seismic activity as specified by test method IEC 60068-2-57 Ff.

Maximum level of Required Response Spectrum (RRS)	50 m/s ² within 2–5 Hz for DR=2%
Frequency range	0.3–50 Hz
Time history signal	Verteq II

The Baseband operates reliably during random vibration as specified by test method IEC 60068-2-64 Fh method 1

Random vibration, normal operation	+12 m ² /s ³	0.3 m ² /s ³	−12 m ² /s ³
------------------------------------	------------------------------------	------------------------------------	------------------------------------



Frequency range 5–10 Hz 10–50 Hz 50–150 Hz

2.5.4 Materials

All Ericsson products fulfill the legal and market requirements regarding the following:

- Material declaration
- Materials' fire resistance, components, wires, and cables
- Recycling
- Restricted and banned material use

2.6 Power Characteristics

This section describes the power supply requirements, power consumption, and fuse and circuit breaker recommendations for the Baseband.

The power for the Baseband can be provided from an AC or a DC power supply.

2.6.1 DC Power Characteristics

The power supply voltage for the Baseband is –48 V DC. The power supply requirements are listed in [Table 8](#).

Table 8 Baseband DC Power Supply Requirements

Conditions	Values and Ranges
Nominal voltage	–48 V DC
Normal voltage range	–58.5 to –38.0 V DC
Non-destructive range	0 to –60 V DC

Fuse and Circuit Breaker Recommendations

The external fuse and circuit breaker capabilities for the Baseband are shown in [Table 9](#).

The recommendations given in this section are based on peak power consumption and do not provide information on power consumption during normal operation.

The recommended melting fuse type is gG-gL-gD in accordance with IEC 60269-1. Circuit breakers must comply with at least Curve 3 tripping characteristics, in accordance with IEC 60934.



Table 9 Baseband Fuse or Circuit Breaker Recommendations

Unit (DC powered)	Minimum Fuse Rating	Maximum Allowed Fuse Rating ⁽¹⁾
Baseband 6502	6 A	32 A
Micro 6502	10 A	32 A

(1) The absolute maximum fuse class in accordance with Baseband design restrictions.

2.6.2

AC Power Characteristics

The normal voltage range for the Baseband is 100 to 250 V AC. The power supply requirements are listed in [Table 10](#).

Table 10 Baseband AC Power Supply Requirements

Conditions	Values and Ranges
Nominal Voltage	100–250V AC
Voltage tolerance range	85–275 V AC
Non-destructive range	0–325V AC
Connections	Phase-neutral, Phase-Phase
Frequency	50–60 Hz

Fuse and Circuit Breaker Recommendations

The external fuse and circuit breaker capabilities for the Baseband are shown in [Table 11](#).

The recommendations given in this section are based on peak power consumption and do not provide information on power consumption during normal operation.

The recommended melting fuse type is gG-gL-gD in accordance with IEC 60269-1. Circuit breakers must comply with at least Curve 3 tripping characteristics, in accordance with IEC 60934.

When the Baseband connected Line-Line a 2-pole circuit breaker or dual fuses are required for interruption of both lines. This is also valid when the Baseband is used in an IT system.

Table 11 Baseband Fuse or Circuit Breaker Recommendations

Unit (AC powered)	Minimum Fuse Rating	Maximum Allowed Fuse Rating ⁽¹⁾
Baseband 6502	6 A	16 A
Micro 6502	8 A	32 A

(1) The absolute maximum fuse class in accordance with Baseband design restrictions.



2.6.3 **Power Consumption**

For information on power consumption, see *Power Consumption Guideline for RBS 6000*.

3 Hardware Architecture

The Baseband components for Baseband 6502 installation are shown in [Figure 10](#) and listed in [Table 12](#).

Figure 10 Baseband Components, Baseband 6502

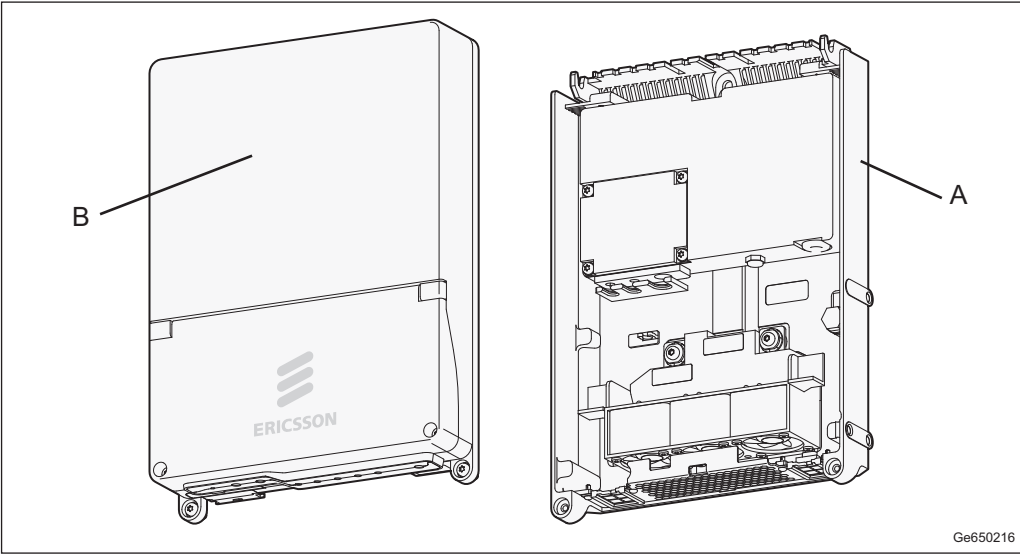


Table 12 Key to Baseband Components, Baseband 6502

Position	Component
A	Standalone Baseband Support 6509 (AC) Standalone Baseband Support 6510 (DC)
B	Baseband Core

The Baseband components for Micro 6502 installation are shown in [Figure 11](#), and listed in [Table 13](#).

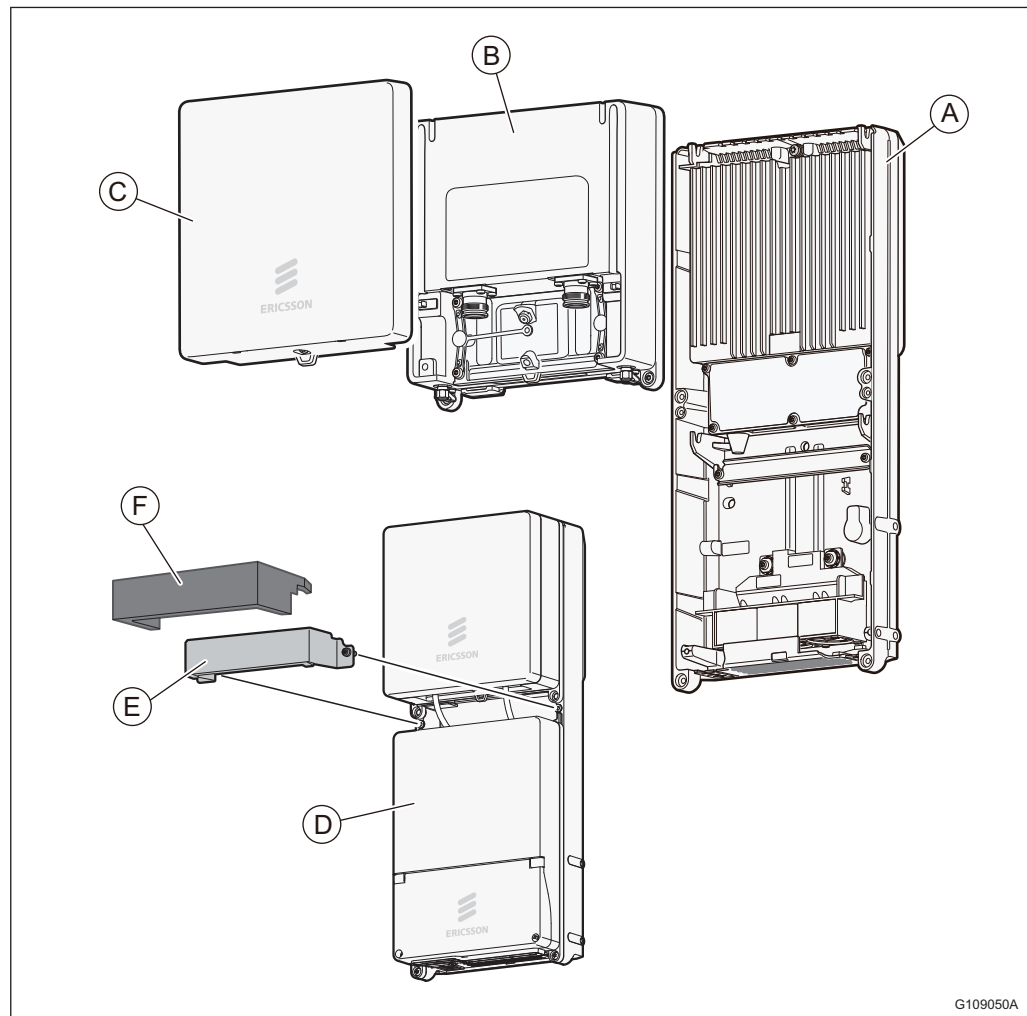


Figure 11 Baseband Components, Micro 6502

Table 13 Key to Baseband Components, Micro 6502

Position	Component
A	Single Radio Baseband Support 6511 (AC) Single Radio Baseband Support 6512 (DC)
B	Radio Core
C	Antenna or Cover
D	Baseband Core
E	Air guide
F	Air guide cover



3.1 Standalone Baseband Support

The Support provides the Baseband Core with integrated mechanical attachment, power conversion and cooling. It consists of a mounting bracket, three fan units, and a PSU.

3.1.1 Mounting Bracket

The mounting bracket provides integrated mechanical attachment for wall and pole mounting, and attachment points for the rail bracket.

3.1.2 Fan Unit

The fan unit operates against ambient temperature to cool the Baseband Core.

3.1.3 PSU

The PSU provides power to the Baseband Core and the fan unit.

The PSU is available in two variants to support AC input and DC -48 V input. The DC variant handles both 2-wire and 3-wire connections.

Included in the PSU is also the external alarm interface.

3.2 Single Radio Baseband Support

The Support provides the Baseband Core with integrated mechanical attachment, power conversion and cooling. It also provides the Radio Core with power conversion. It consists of a mounting bracket, three fan units, and a PSU.

3.2.1 Mounting Bracket

The mounting bracket provides integrated mechanical attachment for wall and pole mounting.

3.2.2 Fan Unit

The fan unit operates against ambient temperature to cool the Baseband Core.

3.2.3 PSU

The PSU provides power to the Radio Core, Baseband Core and the fan unit.



The PSU is available in two variants to support AC input and DC –48 V input. The DC variant handles both 2-wire and 3-wire connections.

Included in the PSU is also the external alarm interface.

3.3 Radio Core

The Radio Core handles the radio communication in the unit and consists of a thermal radiator, TRX, and the FU.

The Radio Antenna Supervision can detect a disconnected antenna:

1. Ericsson Integrated Directional Antenna
2. External antenna with feeder loss < 0.5 dB

Use the LTE AILG feature to ensure enough transmitted power.

The supported Radio Cores are Radio 2203, Radio 2205, and Radio 2208.

Note: The Baseband does not support Radio Core for B8.

3.4 GPS

The optional integrated GPS with GPS and GLONASS capability provides the GPS signal for the Baseband.

3.5 Baseband Core

The Baseband Core handles the digital communication in the unit, such as local maintenance terminal, inter-digital link, electrical and optical Ethernet transmission.

3.6 Directional Antenna

The optional integrated Directional Antenna provides directional RF coverage for the radio, and protects the Radio Core.

3.7 Cover

The esthetic Cover protects the Radio Core when the radio is connected to an external antenna.

The air guide is used to protect the Support.

3.8 Optical Indicators and Buttons

The Baseband is equipped with optical indicators that show system status. The optical indicators are shown in [Figure 12](#) and explained in [Table 14](#).

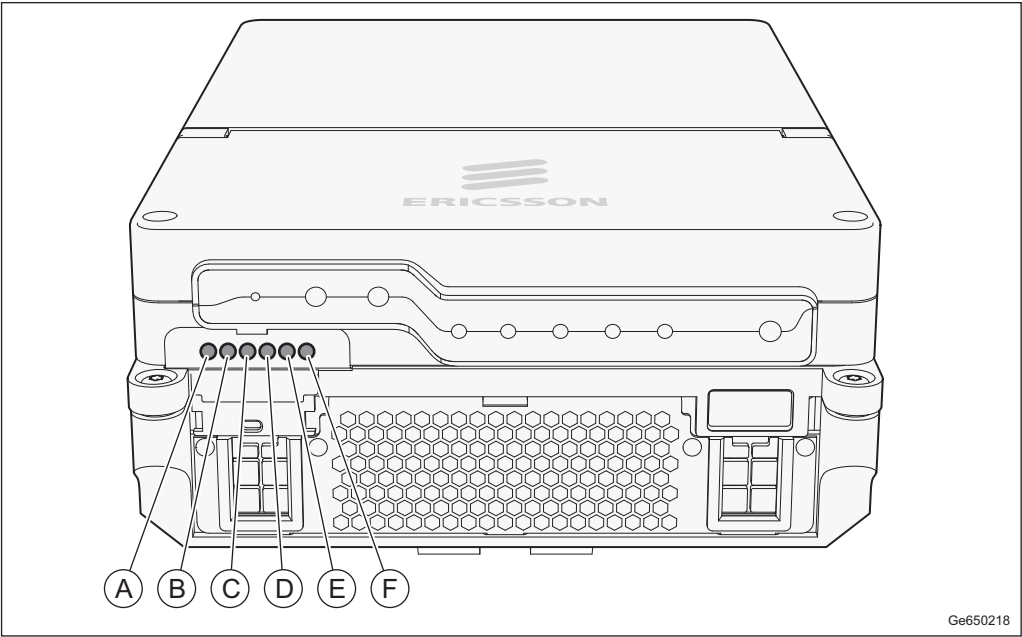
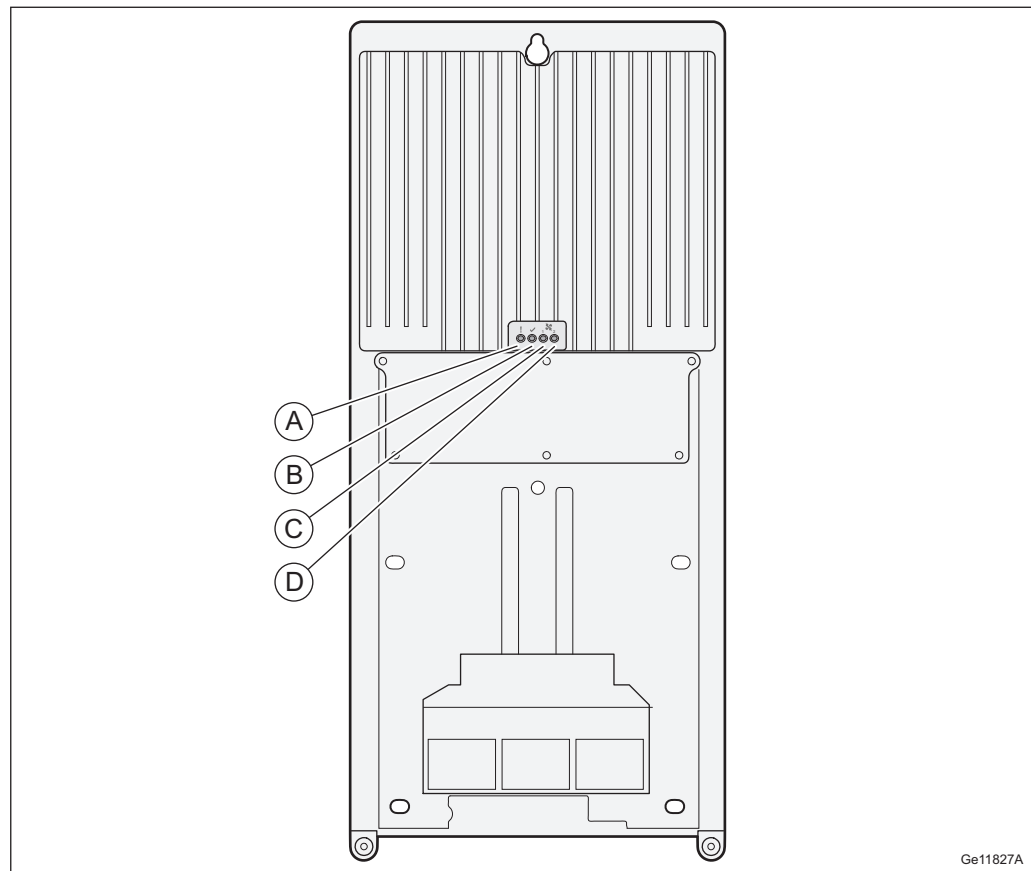


Figure 12 Baseband Optical Indicators

Table 14 Description of Baseband Optical Indicators

Position	Name	Marking
A	Fault	!
B	Operational	✓
C	Maintenance	🔧
D	Status	🔊
E	GPS Status	📶
D	Support System Status	! (in square)

The Support for Micro 6502 is equipped with optical indicators that show system status. The optical indicators are shown in [Figure 13](#) and explained in [Table 15](#).



Ge11827A

Figure 13 Support Optical Indicators for Micro 6502

Table 15 Description of Support Optical Indicators for Micro 6502

Position	Name	Marking
A	Fault	!
B	Operational	✓
C, D	Fan Unit 1 Fan Unit 2	✪

4 Connection Interfaces

This section contains information about the Baseband connection interfaces.

4.1 Support

The Support connection interfaces for Baseband 6502 are shown in [Figure 14](#) and listed in [Table 16](#).

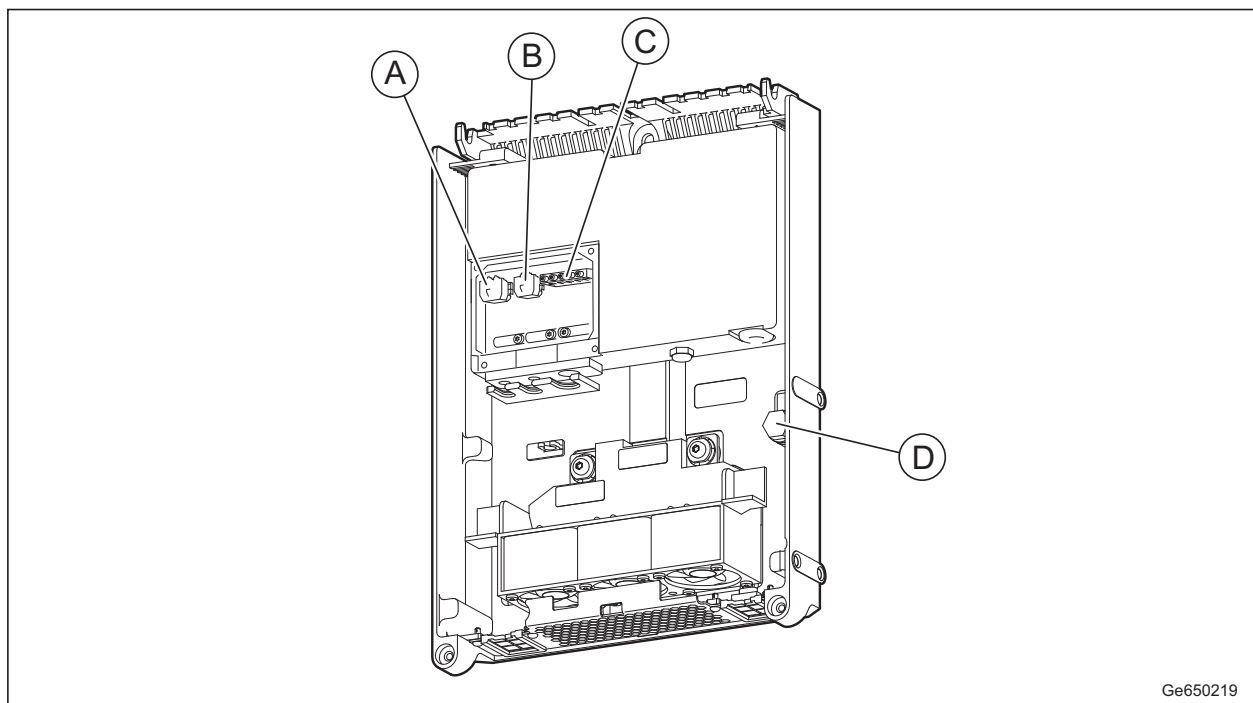



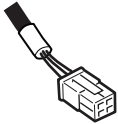



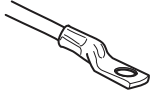



Figure 14 Support Connection Interfaces, Baseband 6502

Table 16 Support Connection Interfaces, Micro 6502

Position	Description	Marking	Connector Types	Cable Types
A	Fan unit		PCB connector 6 Pole Molex Micro-Fit	



Position	Description	Marking	Connector Types	Cable Types
B	External alarm		PCB connector 4 Pole Molex Micro-Fit	
C	-48 V DC power supply	-48V 	Screw terminal block	—
C	AC power supply			
D	Grounding (With DC power supply)		M8 bolt	
D	Grounding (With AC power supply)			

The Support connection interfaces for Micro 6502 are shown in [Figure 15](#) and listed in [Table 17](#).

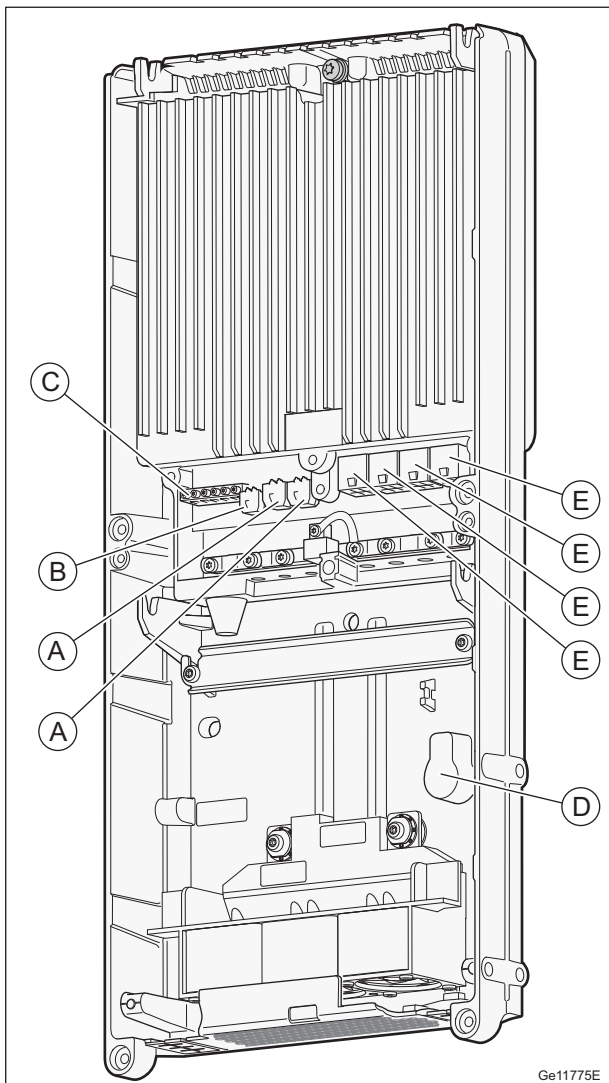

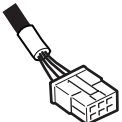

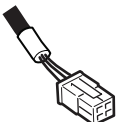


Figure 15 Support Connection Interfaces, Micro 6502

Table 17 Support Connection Interfaces, Micro 6502

Position	Description	Marking	Connector Types	Cable Types
A	Fan unit		PCB connector 6 Pole Molex Micro-Fit	
B	External alarm		PCB connector 4 Pole Molex Micro-Fit	



Position	Description	Marking	Connector Types	Cable Types
C	–48 V DC power supply	–48V	Screw terminal block	–
C	AC power supply			
D	Grounding (With DC power supply)		M8 bolt	
D	Grounding (With AC power supply)			
E	Power Output	DC	PCB connector 6 Pole Molex Mini-Fit Jr	

4.1.1 Position A, Fan Unit Interface

The fan unit provides cooling to the Baseband Core.

4.1.2 Position B, External Alarm Interface

Two external alarms can be connected to the Baseband external alarm port.

4.1.3 Position C, –48 V DC Power Interface

The –48 V DC power connection is made through a screw terminal. The screw terminal accepts cables with the limiting values listed in [Table 18](#).

Table 18 –48 V DC Power Supply Cable Diameter Tolerances

Unit (DC powered)	Cable Length	Cross-Sectional Area of Each Conductor	Outer Diameter over Sheath
Baseband 6502	0–50 m	2.5 mm ²	8–9 mm
Micro 6502	0–100 m	4 mm ²	8–12 mm

For 3-wire power system, the power cable screw terminal has a wire for –48 V conductors, a wire for 0 V, and one wire for FE (Functional Earth). For 2-wire power system, the power cable screw terminal has a wire for –48 V conductors, and a wire for 0 V. The wire color code is market dependent.



When power cable is changed from 2-wire connection to 3-wire connection, the jumper need to be removed for 3-wire connection.

All cables must be shielded. The shield must be folded back over the outer jacket of the cable and properly connected to the PSU chassis in the PSU strain relief, otherwise the radio overvoltage does not function properly. Both ends of the power cables need to be connected to ground.

The DC cable temperature rating must be at least 70 °C.

4.1.4 Position C, AC Power Interface

The AC power connection is made through a screw terminal. The screw terminal accepts cables with the limiting values listed in [Table 19](#).

Table 19 AC Power Supply Cable Diameter Tolerances

Unit (AC powered)	Cable Length	Cross-Sectional Area of Each Conductor	Outer Diameter over Sheath
Baseband 6502	0–100 m	2.5 mm ²	8–9 mm
Micro 6502	0–100 m	4 mm ²	8–12 mm

The power cable has a wire for Line (L), a wire for Line/Neutral (L/N), and a wire for Protective Earth (PE) conductors. The wire color code for wires is market dependent.

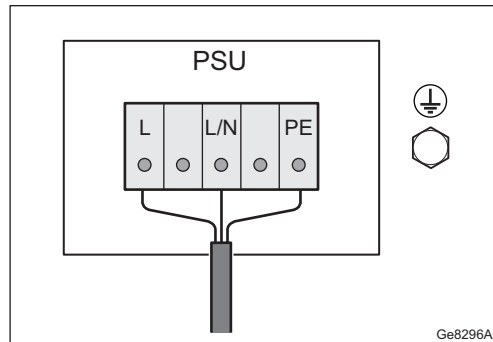
All cables must be shielded. The shield must be folded back over the outer jacket of the cable and properly connected to the PSU chassis in the PSU strain relief, otherwise the radio overvoltage does not function properly. Both ends of the power cables need to be connected to ground.

The AC cable temperature rating must be at least 70 °C.

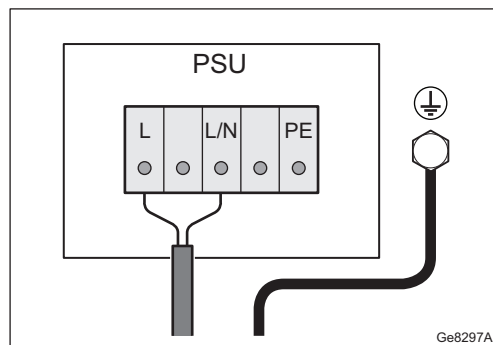
4.1.5 Position D, Grounding Interface

The possible grounding interface solutions for the Baseband are as follows:

AC Grounding

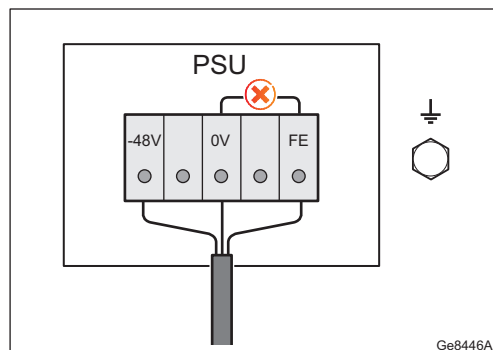


AC power with PE in PSU input terminal.

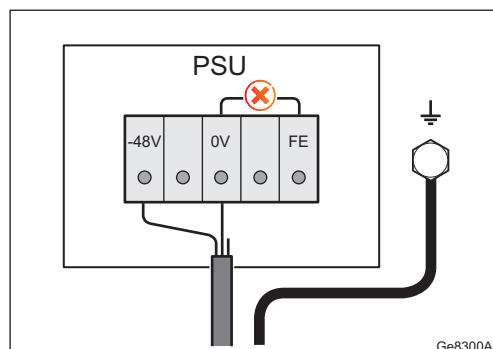


AC power with PE in the grounding interface on the mounting bracket.

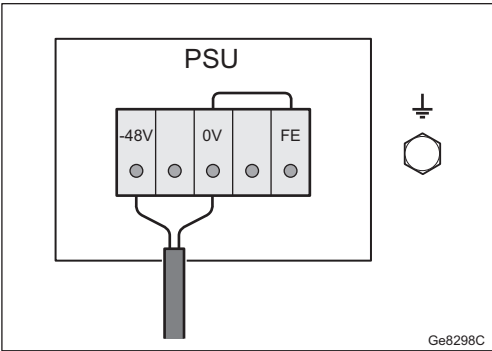
DC Grounding



3-wire power system with FE in PSU input terminal. Remove the jumper between 0V and FE.



3-wire power system with FE in the grounding interface on the mounting bracket. Remove the jumper between 0V and FE.



2-wire power system with FE in PSU input terminal.

4.2 Baseband Core

The Baseband Core connection interfaces are shown in [Figure 16](#) and listed in [Table 20](#).

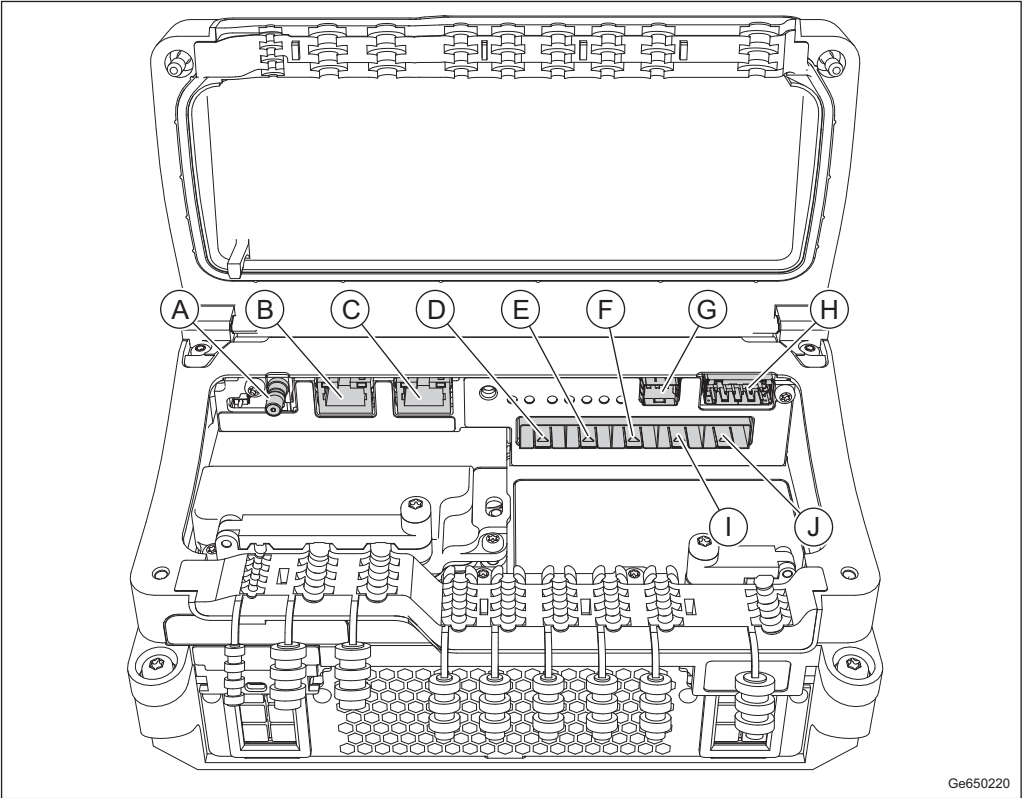


Figure 16 Baseband Core Connection Interfaces

Table 20 Connection Interfaces

Position	Description	Connector	Marking	Optical Indicator ⁽¹⁾
A	GPS Antenna	QMA	GPS	Yes



Position	Description	Connector	Marking	Optical Indicator ⁽¹⁾
B	100 Mbps/1Gbps Ethernet transmission electrical	RJ-45	TN C ⁽²⁾⁽³⁾	Yes
C	LMT A interface ⁽⁴⁾⁽⁵⁾ LMT B Interface ⁽⁵⁾⁽⁶⁾ Sync test interface ⁽⁷⁾⁽⁸⁾	RJ-45	LMT	Yes ⁽⁹⁾
D	Radio interface A Baseband to Radio Unit, optical	SFP+ ⁽¹⁰⁾	RI A	Yes
E	Radio interface B Baseband to Radio Unit, optical	SFP+ ⁽¹⁰⁾	RI B	Yes
F	Radio interface C Baseband to Radio Unit, optical	SFP+ ⁽¹⁰⁾	RI C	Yes
G	Inter Digital Link ethernet (IDLe) Baseband to Baseband optical	Xcede	IDL	No
H	+36V DC Power and internal communication	RPV 447 72/01 (product number)	PWR	Yes
I	1 Gbps/10 Gbps Ethernet transmission optical	SFP+ ⁽¹¹⁾	TN A ⁽²⁾⁽³⁾ (12)	Yes
J	1 Gbps/10 Gbps Ethernet transmission optical	SFP+ ⁽¹¹⁾	TN B ⁽²⁾⁽³⁾⁽¹²⁾	Yes

(1) For more information about optical indicators, refer to *Indicators, Buttons, and Switches*

(2) Supports synchronization over the transport network.

(3) Hardware Activation Codes are required for use of multiple TN ports simultaneously.

(4) RS-232 interface. Accessed with the LMT splitter cable.

(5) For more information about the LMT interfaces, refer to *Connect Client*.

(6) 100 Mbps electrical Ethernet interface.

(7) Compliant with 1PPS 50 Ω phase synchronization measurement interface. Accessed with an adaptor.

(8) For more information about the sync test interface, refer to *Manage Network Synchronization*.

(9) The optical indicator indicates the status of the LMT B interface.

(10) SFP+ is needed for CPRI rates higher than 2.5 Gbps.

(11) SFP+ is needed for transmission rates higher than 2.5 Gbps.

(12) Hardware Activation Codes are required for use of 10Gbps transmission.

4.2.1 Position A, GPS Antenna Interface

The GPS antenna interface provides connections for the Baseband core to the GPS antenna. The interface connector is QMA.

4.2.2 Position B, Electrical TN Interface

The Electrical Ethernet transmission network interface provides electrical transmission. The interface connector type is RJ45 with PoE PSE capability.



This interface can not be used in lightning exposed environments. If the unit is to be placed in an environment subjected to lightning strike, the interface need to be protected from lightning residuals.

4.2.3 Position C, Local Maintenance Terminal Interface

The local maintenance interface provides the connection to configure, monitor, and maintain the Baseband. The interface connector type is RJ45.

4.2.4 Position D, E, and F, Radio Interface for Optical Cable

The RI A, RI B, and RI C interfaces provide connections to optical cables (with outer diameter 4.5–5.5 mm, and complies with standard G657A2) for traffic and timing signals. A Small Form-Factor Pluggable (SFP+) is used to connect the optical cable to the Baseband.

Note: The Baseband uses SFP modules for optical transmission and optical radio interfaces on RI A, RI B, and RI C.

Only SFP+ modules approved and supplied by Ericsson are to be used. These modules fulfill the following:

- Compliance with Class 1 laser product safety requirements defined in standard IEC 60825-1
- Certification according to general safety requirements defined in standard IEC 60950-1
- Functional and performance verified to comply with Radio System specifications

Recommended SFP+ modules are obtained from the product packages for the Radio System and the Main Remote Installation products. For more information about SFP+ modules, refer to *Spare Parts Catalog* and *Main-Remote Installation Products Overview*.

4.2.5 Position G, Inter Digital Link Interface

The inter digital link interface provides connection with digital unit. The interface connector is Xcede.

4.2.6 Position H, DC Power Interface

The Baseband DC power connector supplies the Baseband with +36 V DC from the PSU.



4.2.7 Position I and J, Optical TN Interface

The Optical Ethernet transmission network interfaces provide optical transmission and provide connections to optical cables (with outer diameter 4.5–5.5 mm, and complies with standard G657A2) for traffic and timing signals. A Small Form-Factor Pluggable (SFP+) is used to connect the optical cable.

5 Internal Cabling

This section describes the internal cabling in the Baseband and is for use by on-site Operation and Maintenance (O&M) personnel.

5.1 Internal Power Cable

This section describes the internal power cabling in the Baseband.

5.1.1 Power Supply Unit to Radio Core

The power cabling between Power Supply Unit (PSU) and the Radio Core is shown in [Figure 17](#) and described in [Table 21](#).

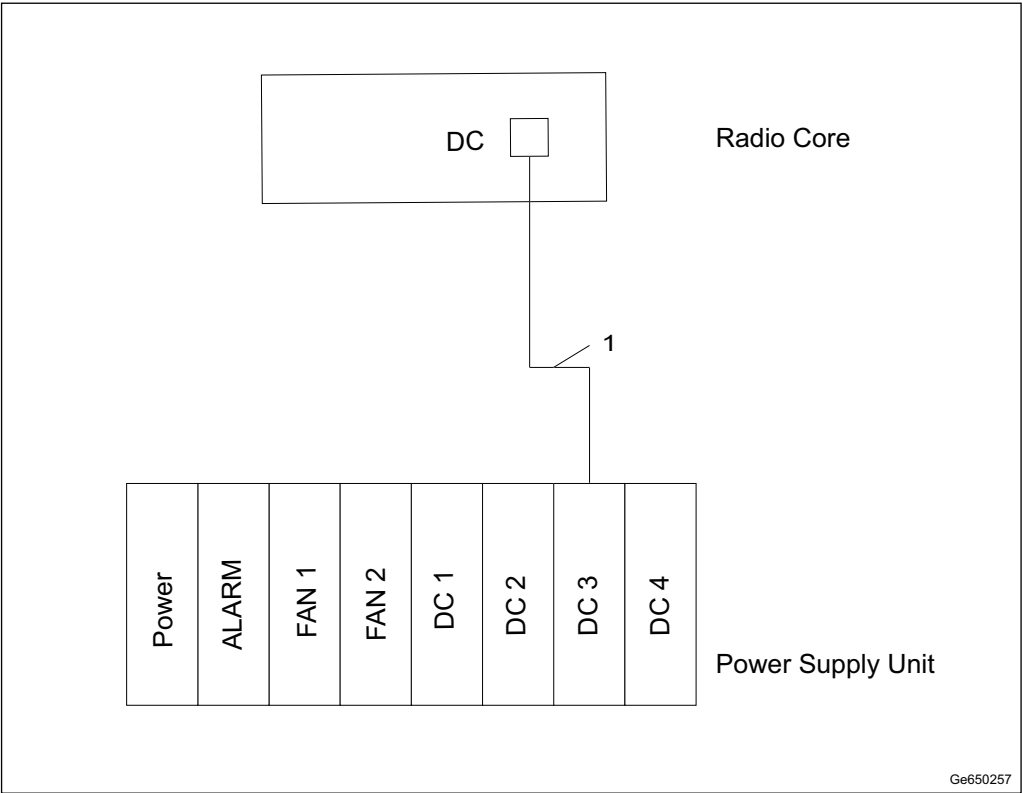


Figure 17 PSU and Radio Core



Table 21 PSU and Radio Core

Pos.	Connections	Qty.	Product No.	Cable Dimension
1	PSU: DC 3 – Radio Core:DC	1	RPM 777 487/00420	The cable is included and pre- assembled in the PSU.

5.1.2 Power Supply Unit to Baseband Core

The power cabling between Power Supply Unit (PSU) and the Baseband Core is shown in [Figure 18](#) and described in [Table 22](#).

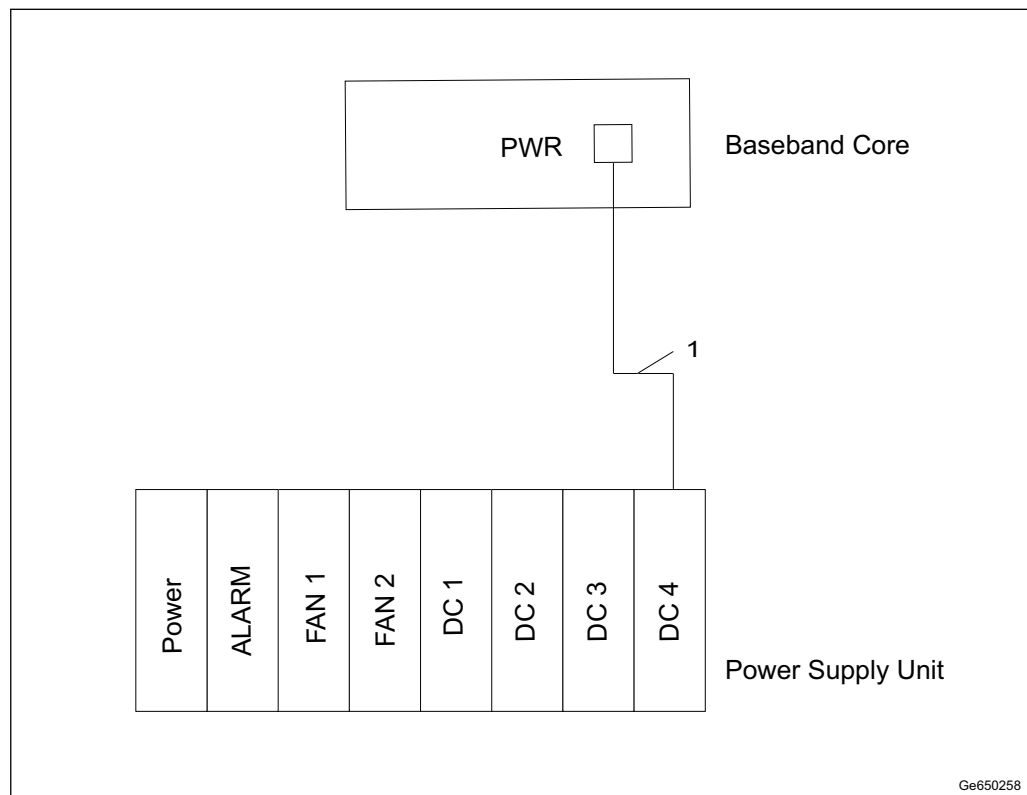


Figure 18 PSU and Baseband Core

Table 22 PSU and Baseband Core

Pos.	Connections	Qty.	Product No.	Cable Dimension
1	PSU – Baseband Core:PWR	1	RPM 119 2252/0500	The cable is included and pre-assembled in the PSU.

5.1.3 Power Supply Unit to Fan Unit

The power cabling of Baseband between Power Supply Unit (PSU) and the Fan Unit is shown in [Figure 19](#) and described in [Table 23](#).

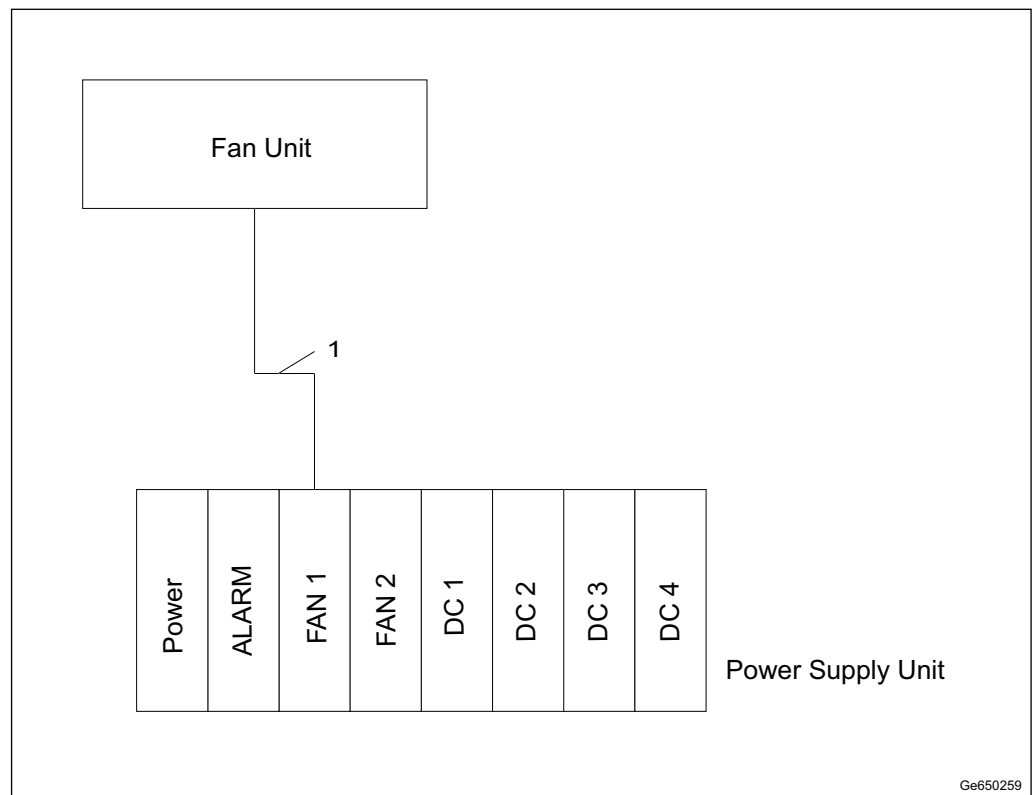


Figure 19 PSU and Fan Unit



Table 23 PSU and Fan Unit

Pos.	Connections	Qty.	Cable Dimension
1	PSU – Fan Unit	1	The cable is included and pre-assembled in the PSU and Fan Unit.

5.2 Signaling Cable

This section describes the internal signaling cables in the Baseband.

5.2.1 GPS to Baseband Core

The signaling cable from the GPS to the Baseband Core is shown in [Figure 20](#) and described in [Table 24](#).

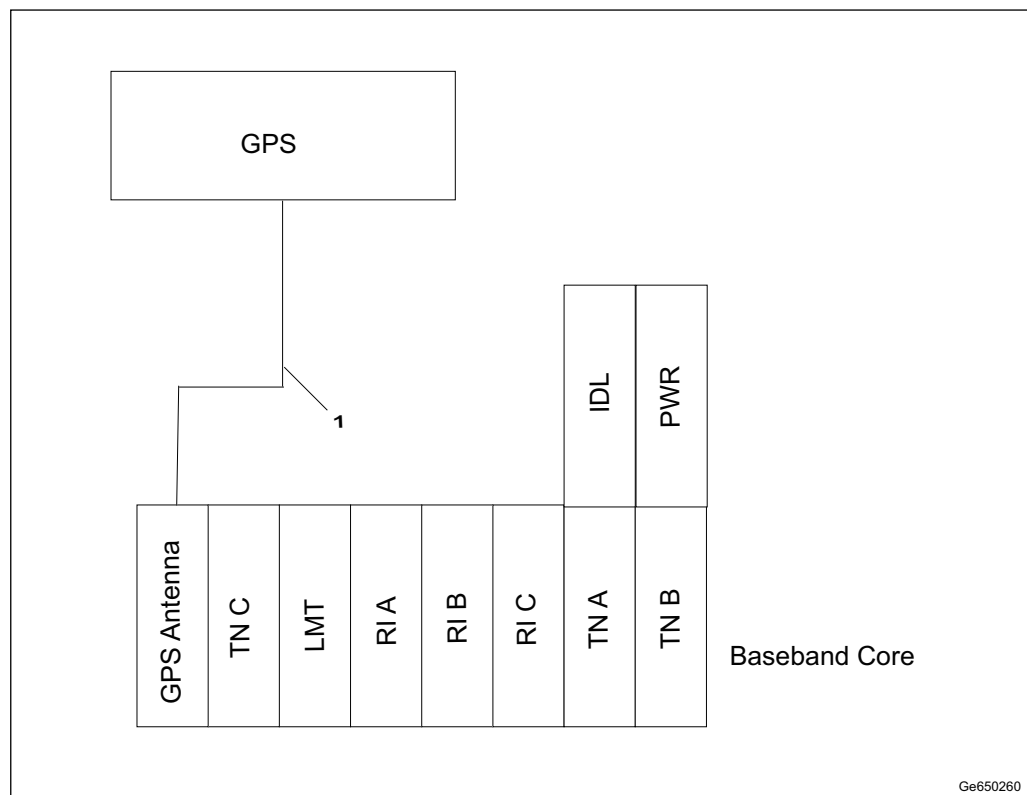


Figure 20 GPS to Baseband Core



Table 24 GPS to Baseband Core

Pos.	Connections	Qty.	Product No.
1	GPS – Baseband Core: GPS	1	KRE 105 255/1

5.2.2

Radio Core to Baseband Core

The signaling cable from the Radio Core to the Baseband Core is shown in [Figure 21](#) and described in [Table 25](#).

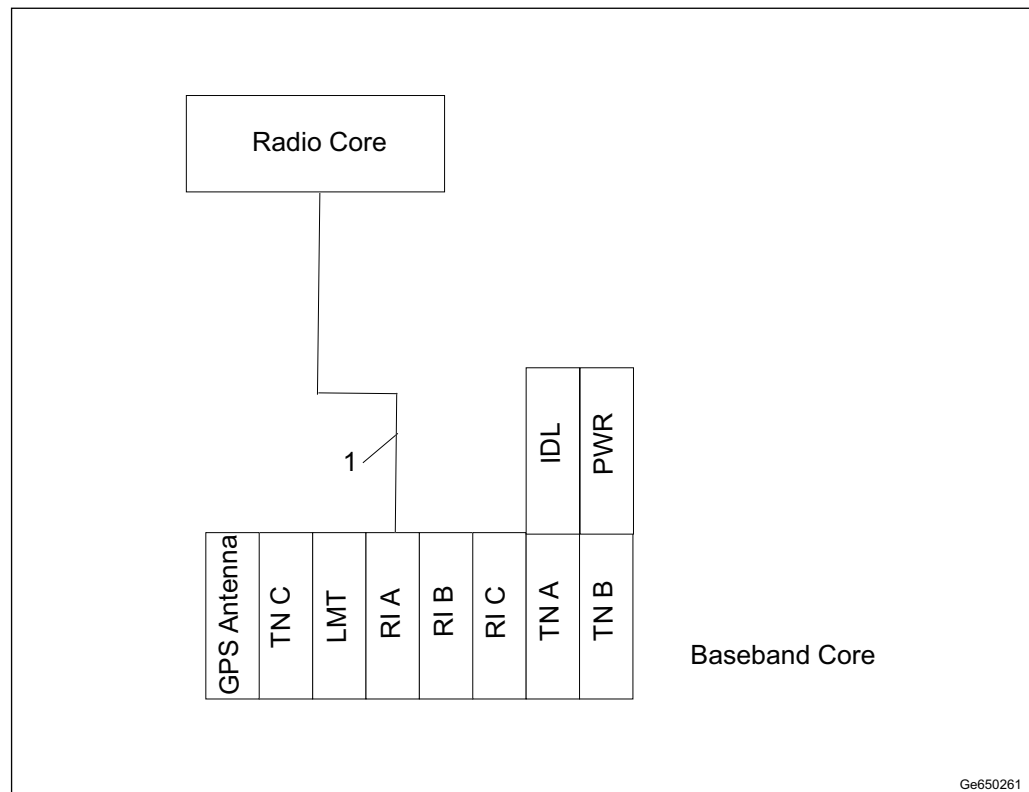


Figure 21 Radio Core to Baseband Core

Table 25 Radio Core to Baseband Core

Pos.	Connections	Qty.	Product No.
1	Radio Core: ➔ 1 – Baseband Core: RI A	1	RPM 253 3512 (SM) ⁽¹⁾ RPM 253 3513 (MM)

(1) One SM fiber is included in Micro 6502 baseband.

6 Standards and Regulations

This section presents a brief overview of standards, regulatory product approval, and declaration of conformity for Baseband.

Declaration of Conformity

"Hereby, Ericsson AB, declares that this RBS is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC and 2011/65/EU."

6.1 Regulatory Approval

The Radio System complies with the following market requirements:

- European Community (EC) market requirements, R&TTE Directive 2014/53/EU

CE 0168 Ⓢ Alert Mark (Class 2 equipment). Restrictions to use the apparatus may apply in some countries or geographic areas. Individual license to use the specific radio equipment may be required.

The apparatus may include radio Transceivers with support for frequency bands not allowed or not harmonized within the EC.

- Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive (2011/65/EU).
- North American market requirements.
- Products containing radio Equipment outside North America and in countries not recognizing the CE-mark may be labeled according to national requirements or standards.

6.1.1 Environmental Standards Compliance

The Radio System complies with the following environmental standard:

Europe

- EN 50 581 (RoHS)



6.1.2 Safety Standards Compliance

In accordance with market requirements, the Radio System complies with the following product safety standards and directives:

International

- IEC 60950-1
- IEC 62368-1

Europe

- EN 60 950-1
- EN 62368-1

North America

- UL 62368-1
- CSA-C22.2 62368-1

6.1.3 Outdoor Specific Requirements

The Radio System complies with the following outdoor specific requirements:

International

- IEC 60529
- IEC 60950-22

Europe

- EN 60 529
- EN 60 950-22

North America

- CSA-C22.2 No. 60950-22-07
- UL 50E
- UL 60950-22



6.1.4 Radio Standards Compliance

The Radio System complies with the following radio standards:

International

- 3GPP TS37.141

Europe

- ETSI EN 301 908-1
- ETSI EN 301 908-18

6.1.5 EMC Standards Compliance

The Radio System complies with the following Electromagnetic Compatibility (EMC) standards:

International

- 3GPP TS37.113

Europe

- ETSI EN 301 489-1
- ETSI EN 301 489-50

North America

- FCC CFR 47 Part 15 B
- IC ICES-003 B

6.1.6 Marking

To show compliance with legal requirements, the product is marked with the following labels:

Europe

- CE mark

**North America**

- usETL/cETL
- FCC CFR 47 Part 15 Statement
- IC ICES-003 Statement
- FCC ID (located on Radio 2203)
- IC ID (located on Radio 2203)

6.2 Other Standards and Regulations

The standards and regulations in this section are not regulatory approved.

6.2.1 Spare Parts

This Baseband complies with the Ericsson Serviceability and Spare Parts Strategy.

6.2.2 Surface Quality

The surface quality of the Baseband is in accordance with Ericsson standard class A3.

6.2.3 Vandal Resistance

Unauthorized access is not possible without damaging the unit.